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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------------|------------------|
| 09/770,639 | 01/29/2001 | Shin Yamada | P20526 | 6746 |
| 7055 | 7590 | 06/16/2004 | | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | EXAMINER BALI, VIKKRAM | |
| | | | ART UNIT 2623 | PAPER NUMBER |
| DATE MAILED: 06/16/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,639

Applicant(s)

YAMADA ET AL.

Examiner

Vikkram Bali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 19-22, 24 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 13-18, 23 and 26-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Election/Restrictions

1. Claims 10-12, 19-22, 24-25 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-4, 6, 9, 13-14, 23 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 5859921).

With respect to claim 1, Suzuki discloses detecting the candidate for an eye and determining a face area from, (see figure 6, the graph gets the candidate eye area and the area between the eye) as claimed. However, he fails to explicitly disclose the candidate area for an interval between eyes from a positional relationship, as claimed. But, as seen from the figure 6, the graph, the area between the eyes have different graphical representation and that is the candidate area between the eyes, as claimed. Therefore, one ordinary skilled in the art at the time of invention can simply call the area between the eye with different graphical representation as the candidate area between the eyes in order to simply get to the face of the person.

With respect to claims 2 and 3, he further discloses, candidate areas are detected from the luminance characteristics of segments in nearly horizontal direction, (see figure 6, the histogram of the light "luminance" and the horizontal and the vertical direction) as claimed.

With respect to claim 4, he further discloses, dividing the part of the image into small areas and detecting the candidate areas between the eyes, (see figure 6, the part of the image is divided into three parts and the part between the eye is determined) as claimed.

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Claims 6 and 9 are rejected for the same reasons as set forth in the rejection of the claims 2 and 3, because claims 6 and 9 are claiming similar subject matter as claims 2 and 3.

With respect to claim 13, he further discloses, the face area is determined using the color contained in the area, (see figure 6, the histogram shows the area of the face between the eye as different and this histogram is the light reflectance i.e. the color of the face) as claimed.

Claims 14, 23 and 27 are rejected for the same reasons as set forth in the rejection of the claims 1+2+3, because claims 14, 23 and 27 are claiming similar subject matter as claims 1+2+3.

Claim 26 is rejected for the same reasons as set forth in the rejection of the claim 1, because claim 26 is claiming similar subject matter as claim 1.

5. Claims 5, 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 5859921) in view of Suzuki et al (US 6215891).

With respect to claim 5, Suzuki discloses the invention substantially as discloses and as describe in claim 5, 7 and 8. However, he fails to disclose edge information of the pixels in the small areas of the image, as claimed. Suzuki teaches dividing the image into small areas and finding small parts of the entire image using the edge intensity determination analysis, (see figure 8 S207) as claimed. It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references because they are analogous because they are solving similar problem of eye detection.

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The methodology of finding the eye using the edge analysis can be incorporated in to the Suzuki's system because it is one of the different ways of finding the elements or the feature of the image, and it is conventionally done in the image analysis art.

6. Claims 15-18 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 5859921) in view of Lobo et al (US 5781650).

With respect to claim 15 and 16 Suzuki discloses the invention substantially as discloses and as describe in claim 1. However, he fails to disclose the determination of age by the face, as claimed. Lobo teaches a system for determining the age of the person from the face (see figure 1) as claimed.

It would have been obvious to one ordinary skilled in the art at the time of invention to combine the references as they are solving similar problem of face analysis. The feature of determination can be incorporated into the Suzuki's system to simply produce the age of the person, using the Suzuki's system.

With respect to claim 17, Lobo further teaches the moving pictures, storing the information and retrieving the moving pictures, (see col. 4, lines 5-15, a computer i.e. the memories to store and retrieve and the camcorder i.e. the moving pictures) as claimed.

With respect to claim 18, Lobo further teaches the vector analysis can be performed (see col. 24, lines 10-14) as claimed.

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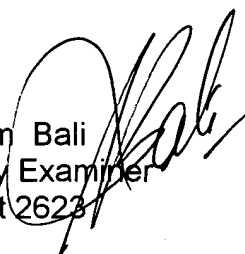
Claims 28 and 29 are rejected for the same reasons as set forth in the rejection of the claims 17 and 18, because claims 28 and 29 are claiming similar subject matter as claims 17 and 18.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali
Primary Examiner
Art Unit 2623



vb
June 3, 2004